**3CP10: Machine Learning**

**List of Practical**

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| Lab No. | Practical |
| Lab – 1 | Introduction of analysis packages like NumPy and Panda and exercise based on it.   * Check whether entered number is positive or negative * Find sum of all number stored in a List * Write a script to iterate through list using numeric indexing * Find repeated items in a tuple * Calculate product using function, multiplying all the numbers of a given tuple |
| Lab – 2 | Introduction of analysis packages like MatPlotlib and exercise based on it. Introduction of Loading of .csv file with python packages (Standard Library, Panda, Numpy). |
| Lab – 3 | Perform data pre-processing on given dataset.   * MinMax Scaler * Standard Scaler * Normalizatiion * Binarization * One Hot Encoding * Label Encoding |
| Lab – 4 | Write a program to implement linear and multiple linear regression model. |
| Lab – 5 | Write a program to implement naïve Bayesian classifier for a sample training dataset stored as a .csv file. Compute the accuracy, precision, recall of the classifier. |
| Lab – 6 | Write a program to implement ID3 algorithm. Use appropriate dataset for building the decision tree and apply this knowledge to classify a new sample. |
| Lab – 7 | Write a program to implement K - means algorithm. |
| Lab – 8 | Write a program to implement Hierarchical – Agglomerative clustering algorithm. |
| Lab – 9 | Write a program to implement K Nearest Neighbour algorithm to classify the iris dataset. |
| Lab – 10 | Write a program to implement Support Vector Machine for training sample dataset. |
| Lab – 11 | Build an Artificial Neural Network by implementing the backpropagation algorithm and test the same using appropriate datasets. |
| Lab – 12 | Write a program to implement Convolution Neural Network for any one application. |
| Assignment 1 | Deploying ML model on web with Flask |
| Assignment 2 | Image classification |